

REMARKS

Claim Rejections 35 U.S.C. § 102 (e)

The Examiner has rejected claims 54, 56-57, 59, 61-62, 64, and 66-67 under 35 U.S.C. §102 (e) as being anticipated by James et al. (US 6,099,394).

In the Examiner's opinion, James et al. teaches a polishing pad, 10, with a center area, a first set of grooves, 20, having a first depth, width and density, an edge area with a second set of grooves, 18, having a second depth, width and density. The Examiner states that the cited reference does teach a polishing pad having a center area and an edge area containing grooves with different depths, widths, and densities, as claimed.

Applicant respectfully disagrees with the Examiner. The Examiner does not provide any indication as to which drawing or which portion of the specification of James et al. is being referred to. However, Applicant believes that the Examiner is referring to Figure 1. Applicant wishes to respectfully bring to the attention of the Examiner that James et al. states that "FIG. 1 is an enlarged sectional view showing a polishing pad in accordance with the present invention". See lines 53-55 of Col. 14. See Figure 1.

In the Applicant's opinion, Figure 1 of the cited James et al. reference shows an arbitrary portion of a polishing pad (10) that has a repeating pattern of shallow/narrow grooves (18) and deep/narrow grooves (20). Applicant believes that neither the drawing nor the specification of the cited reference teaches any spatial relationship between the characteristics of the grooves and any particular location on either the polishing pad (104) or the wafer (106) being polished. See lines 60-62 in Col. 14. See Figure 2.

In contrast, claims 54, 56-57, 59, 61-62, 64, and 66-67 of the Applicant's claimed invention specifically claim different characteristics for the grooves located

in a center area of a polishing pad as compared to the grooves located in an edge area of a polishing pad. See lines 2-23 on page 12 and lines 1-9 on page 13 of the specification. See Figure 5A, Figure 5B, and Figure 6. The differences between the grooves in the center area and the grooves in the edge area may involve one or more of the following characteristics: groove shape, groove depth, groove width, and groove density. See lines 8-10 on page 10 of the specification.

It is further the Examiner's opinion that the cited James et al. reference also teaches that the first and second depths are within the range of approximately 1-90% of the pad thickness, and the first and second widths are within a range of approximately 1-100 mils, and the first and second densities are within a range of 2-50 grooves/inch.

Applicant is unable to find the portions of the cited reference that teach the above dependent claims. Applicant respectfully requests the Examiner to provide the appropriate column numbers and line numbers.

The James et al. reference cited by the Examiner does not teach each and every element of Applicant's claimed invention. Therefore, Applicant's claimed invention is not anticipated by James et al.

In view of the foregoing, Applicant respectfully requests the Examiner to withdraw the rejections to claims 54, 56-57, 59, 61-62, 64, and 66-67 under 35 U.S.C. §102 (e).

Allowable Subject Matter

Claims 55, 58, 60, 63, and 65 are objected to by the Examiner as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As discussed in the previous section, Applicant believes that the base claims 54, 59, and 64 of Applicant's claimed invention are not anticipated under 35 U.S.C. §102 (e) by the James et al. reference cited by the Examiner and should be allowable.

In view of the foregoing, Applicant respectfully requests the Examiner to withdraw the objections to claims 55, 58, 60, 63, and 65.

CONCLUSION

Applicant believes that all claims pending, including the new claims 68-75, are now in condition for allowance so such action is earnestly solicited at the earliest possible date.